Issuance Date: June 6, 2005
Effective Date: July 1, 2005
Expiration Date: June 30, 2005

STATE WASTE DISCHARGE PERMIT NUMBER ST 5049

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Southwest Regional Office

In compliance with the provisions of the
State of Washington Water Pollution Control Law
Chapter 90.48 Revised Code of Washington, as amended,
authorizes

Symons Frozen Foods, Inc.

619 Goodrich Road

Centralia, WA 98531

Facility Location: 619 Goodrich Road Centralia, Washington	Discharge Location: Legal Description : Sections 23, 24,25 and 26, Range 3W, Township 15N
Industry Type: Food Processing	Latitude: 46° 45' 30" N Longitude: 123° 00' 30" W
SIC Code: 2037	

to discharge wastewater in accordance with the special and general conditions which follow.

Kelly Susewind, P.E., P.G.
Southwest Region Manager
Water Quality Program
Washington State Department of Ecology

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GENERAL CONDITIONS

SUMMARY OF PERMIT REPORT SUBMITTALS

Refer to the Special and General Conditions of this permit for additional submittal requirements.

Permit Section	Submittal	Frequency	First Submittal Date
S2.A.	Discharge Monitoring Report	Quarterly	October 15, 2005
S6.A.	Summary Hydrogeological Report	1/permit cycle	April 15, 2009
S6.B.	Annual Hydrogeological Report	1/year	April 15, 2006
S7.A.	Summary Irrigation and Crop Management Plan	1/permit cycle	April 15, 2009
S7.B.	Annual Irrigation and Crop Management Plan	1/year	April 15, 2006
G7.	Application for permit renewal	1/permit cycle	April 15, 2009

SPECIAL CONDITIONS

S1. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

All discharges and activities authorized by this permit shall be consistent with the terms and conditions of this permit. The discharge of any of the following pollutants more frequently than, or at a concentration in excess of, that authorized by this permit shall constitute a violation of the terms and conditions of this permit.

Beginning on the effective date and lasting through the expiration date of this permit, the Permittee is authorized to apply wastewater to land via spray irrigation at rates in irrigation and crop management plan on the following designated irrigation lands:

> Approximately 256 acres located approximately 3.9 miles north-northwest of the city of Centralia, one mile west of Interstate 5, west of Old Highway 99, within Sections 23, 24, 25, and 26, Township 15N, Range 3W.

Initially, nitrogen application rates shall not exceed 150 lbs per acre. Approval of application rates in excess of 150 lbs per acre must be demonstrated by written application to not exceed the nitrogen limits. The point of compliance is in monitoring wells identified in the hydrogeologic study.

A. Wastewater Monitoring

The sampling point for the effluent from the above ground treatment works will be at the end of pipe prior to discharging.

The Permittee shall monitor the wastewater according to the following schedule:

Parameter	Units	Sample Point	Maximum Daily Limit	Sampling Frequency	Sample Type
Flow	MGD	End of pipe	Report	Quarterly[a]	Metered
BOD_5	mg/L	End of pipe	Report	Quarterly[a]	Grab
pH	Standard Units (s.u.)	End of pipe	Report	Quarterly[a]	Grab
Total Volatile Dissolved Solids	mg/L	End of pipe	Report	Quarterly[a]	Grab
Total Dissolved Solids	mg/L	End of pipe	Report	Quarterly[a]	Grab
NO_3 (as N)	mg/L	End of pipe	Report	Quarterly[a]	Grab

Parameter	Units	Sample Point	Maximum Daily Limit	Sampling Frequency	Sample Type
TKN (as N)	mg/L	End of pipe	Report	Quarterly[a]	Grab
NH_3 (as N)	mg/L	End of pipe	Report	Quarterly[a]	Grab
Bicarbonate	mg/L	End of pipe	Report	Quarterly[a]	Grab
Carbonate	mg/L	End of pipe	Report	Quarterly[a]	Grab
Chloride	mg/L	End of pipe	Report	Quarterly[a]	Grab
Fluoride	mg/L	End of pipe	Report	Quarterly[a]	Grab
Sulfate	mg/L	End of pipe	Report	Quarterly[a]	Grab
Calcium	mg/L	End of pipe	Report	Quarterly[a]	Grab
Magnesium	mg/L	End of pipe	Report	Quarterly[a]	Grab
Phosphate	mg/L	End of pipe	Report	Quarterly[a]	Grab
Potassium	mg/L	End of pipe	Report	Quarterly[a]	Grab
Sodium	mg/L	End of pipe	Report	Quarterly[a]	Grab
Manganese	mg/L	End of pipe	Report	Quarterly[a]	Grab
Total-P (as P)	mg/L	End of pipe	Report	Quarterly[a]	Grab
[a]Samples shall be taken on the working day nearest March 15, June 15, September 15, and December 15.					

B. Ground Water Monitoring

The sampling points for ground water will be monitoring wells numbered according to the Hydrogeologic Study.

Monitoring Well Locations

Monitoring Well	Latitude	Longitude	Type
MW-1	N 46° 45' 01″	W 123° 00′ 42 ″	Upgradient
MW-2	N 46° 45' 31″	W 123° 00′ 08″	Upgradient
MW-3	N 46° 46' 01″	W 123° 00′ 47″	Downgradient
MW-4	N 46° 45' 39″	W 123° 00′ 45″	Downgradient
MW-5	N 46° 45' 26″	W 123° 01′ 01″	Downgradient
MW-6*	N 46° 45' 30″	W 123° 01′ 36″	Downgradient
*MW-6 will be abandoned. MW-7 will replace MW-6. See S8, Schedule of Compliance. MW-8 will be added under S8. Locations will be determined upon well completion.			

The Permittee shall monitor the ground water at all monitoring wells described in the table above according to the following schedule and limitations:

Parameter	Units	Maximum Daily Limit	Sampling Frequency	Sample Type
Ferrous Iron	mg/L	Report	Quarterly[a]	Field Measurement
Iron (Total)	mg/L	Report	Quarterly[a]	Grab
Total Organic Carbon	mg/L	Report	Quarterly[a]	Grab
pH	s.u.	Report	Quarterly[a]	Grab
Conductivity	micromho/cm	Report	Quarterly[a]	Field Measurement
Water Level	Elevation Feet	Report	Quarterly[a]	Field Measurement
Temperature	ºC	Report	Quarterly[a]	Field Measurement
Dissolved Oxygen	mg/L	Report	Quarterly[a]	Field Measurement, Filtered
Total Volatile Dissolved Solids	mg/L	Report	Quarterly[a]	Grab
Total Dissolved Solids	mg/L	500	Quarterly[a]	Grab
Nitrate (as N)	mg/L	10	Quarterly[a]	Grab
TKN (as N)	mg/L	Report	Quarterly[a]	Grab
Bicarbonate	mg/L	Report	Quarterly[a]	Grab
Carbonate	mg/L	Report	Quarterly[a]	Grab
Chloride	mg/L	250	Quarterly[a]	Grab
Fluoride	mg/L	Report	Quarterly[a]	Grab
Sulfate	mg/L	250	Quarterly[a]	Grab
Calcium	mg/L	Report	Quarterly[a]	Grab
Magnesium	mg/L	Report	Quarterly[a]	Grab
Orthophosphate	mg/L	Report	Quarterly[a]	Grab
Potassium	mg/L	Report	Quarterly[a]	Grab
Sodium	mg/L	Report	Quarterly[a]	Grab
Manganese	mg/L	Report	Quarterly[a]	Grab
BOD_5	mg/L	Report	Quarterly[a]	Field Measurement
[a]Samples shall be taken on the working day nearest March 15, June 15, September 15, and December 15.				

C. Soil Monitoring

1. Semi-Annual Monitoring

The Permittee shall perform soil monitoring on the irrigation lands twice per year. These sampling sites shall be located so as to be representative of each irrigation site or as represented in the crop management plan. If possible, sampling sites shall remain in the same vicinity from year to year. Testing at each sampling site shall be done on 1 foot soil increments. Results shall be submitted annually with the annual Irrigation and Crop Management Plan.

Composite samples will be for one depth [0-12"]; and will be from a minimum of ten (10) cores. Samples will be collected at a time that best represents soil conditions at the beginning and end of the crop-growing season.

The Permittee shall monitor the soils in the spray fields in June and October each year according to the following schedule:

Parameter	Units	Maximum Daily Limit	Sample Point	Depth Increments[1]
Exchangeable sodium percentage	percent	Report	Each field	1
Cation exchange capacity	meq/100g	Report	Each field	1
Organic matter	percent	Report	Each field	1
Moisture content	percent	Report	Each field	1
TKN (as N)	mg/Kg	Report	Each field	1
NO_3 (as N)	mg/Kg	Report	Each field	1
NH_3 (as N)	mg/Kg	Report	Each field	1
Total-P (as P)	mg/Kg	Report	Each field	1
Conductivity	microohms/ cm	Report	Each field	1
Sodium	meq/100g	Report	Each field	1
Calcium	meq/100g	Report	Each field	1
Magnesium	meq/100g	Report	Each field	1
Potassium	mg/Kg	Report	Each field	1
Sulfate (as S)	mg/Kg	Report	Each field	1
pH	s.u.	Report	Each field	1

[1] Depth (inches) vs. Depth increment (ft.) for composite samples:
0 -12"1

D. Crop Monitoring

The Permittee shall perform crop monitoring on each field once per harvest. Composite samples will be comprised of at least ten (10) random samples collected from each center-pivot field. Reporting shall be submitted with the Annual Irrigation and Crop Management Plan.

Parameter	Units	Sample Point	Maximum Daily Limit	Sample Frequency	Sample Type
Crop production	dry tons/ac	Each Field	Report	Once per harvest	Composite
Moisture content	percent	Each Field	Report	Once per harvest	Composite
Total Kjeldahl Nitrogen	percent	Each Field	Report	Once per harvest	Composite
NO_3 (as N)	mg/Kg (dry wt)	Each Field	Report	Once per harvest	Composite
Total-P (as P)	percent	Each Field	Report	Once per harvest	Composite
Sodium	mg/Kg (dry wt)	Each Field	Report	Once per harvest	Composite
Magnesium	mg/Kg (dry wt)	Each Field	Report	Once per harvest	Composite
Potassium	mg/Kg (dry wt)	Each Field	Report	Once per harvest	Composite
Calcium	mg/Kg (dry wt)	Each Field	Report	Once per harvest	Composite

E. Sampling and Analytical Procedures

Samples and measurements taken to meet the requirements of this permit shall be representative of the volume and nature of the monitored parameters, including representative sampling of any unusual discharge or discharge condition, including bypasses, upsets and maintenance-related conditions affecting effluent quality.

Ground water sampling shall conform to the latest protocols in the *Implementation Guidance for the Ground Water Quality Standards*, (Ecology 1996).

Sampling and analytical methods used to meet the water and wastewater monitoring requirements specified in this permit shall conform to the latest revision of the *Guidelines Establishing Test Procedures for the Analysis of Pollutants* contained in 40 CFR Part 136 or to the latest revision of *Standard Methods for the Examination of Water and Wastewater* (APHA), unless otherwise specified in this permit or approved in writing by the Department of Ecology (Department).

All soil analysis and reporting will be in accordance with *Laboratory Procedures*, Soil Testing Laboratory, Washington State University, November, 1981.

F. Flow Measurement

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the quantity of monitored flows. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements are consistent with the accepted industry standard for that type of device. Frequency of calibration shall be in conformance with manufacturer's recommendations and at a minimum frequency of at least one calibration per year. Calibration records shall be maintained for at least three years.

G. Laboratory Accreditation

All monitoring data required by the Department shall be prepared by a laboratory registered or accredited under the provisions of, *Accreditation of Environmental Laboratories*, Chapter 173-50 Washington Administrative Code (WAC). Flow, temperature, settleable solids, conductivity, pH, and internal process control parameters are exempt from this requirement. Conductivity and pH shall be accredited if the laboratory must otherwise be registered or accredited. Crops, soils, and hazardous waste testing has not been included in the accreditation program, so that soil and crop testing shall be done by a laboratory following a national standard of performance.

S2. REPORTING AND RECORDKEEPING REQUIREMENTS

The Permittee shall monitor and report in accordance with the following conditions. The falsification of information submitted to the Department shall constitute a violation of the terms and conditions of this permit.

A. Reporting

The first monitoring period begins on the effective date of the permit. Monitoring results shall be submitted quarterly for ground water monitoring. Soil and crop monitoring data shall be submitted in the annual Irrigation and Crop Management Report. Monitoring data obtained during the previous quarter shall be summarized and reported on a form provided, or otherwise approved, by the Department, and be postmarked or received no later than the 15th day of the month following the completed reporting period, unless otherwise specified in this permit. The report(s) shall be sent to the Department of Ecology, Southwest Regional Office, P.O. Box 47775, Olympia, Washington 98504-7775.

Discharge Monitoring Report forms must be submitted whether or not the facility was discharging. If there was no discharge or the facility was not operating during a given monitoring period, submit the form as required with the words "no discharge" entered in place of the monitoring results.

B. Records Retention

The Permittee shall retain records of all monitoring information for a minimum of three years. Such information shall include all calibration and maintenance records and all original recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this

permit. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by the Director.

C. Recording of Results

For each measurement or sample taken, the Permittee shall record the following information: (1) the date, exact place and time of sampling; (2) the individual who performed the sampling or measurement; (3) the dates the analyses were performed; (4) who performed the analyses; (5) the analytical techniques or methods used; and (6) the results of all analyses.

D. Additional Monitoring by the Permittee

If the Permittee monitors any pollutant more frequently than required by this permit using test procedures specified by Condition S1 of this permit, then the results of this monitoring shall be included in calculation and reporting of the data submitted in the Permittee's self-monitoring reports.

E. Noncompliance Notification

In the event the Permittee is unable to comply with any of the permit terms and conditions due to any cause, the Permittee shall:

1. Immediately take action to stop, contain and cleanup unauthorized discharges or otherwise stop the violation, and correct the problem;

2. Repeat sampling and analysis of any violation and submit the results to the Department within 30 days after becoming aware of the violation;

3. Immediately notify the Department of the failure to comply; and

4. Submit a detailed written report to the Department within 30 days, unless requested earlier by the Department, describing the nature of the violation, corrective action taken and/or planned, steps to be taken to prevent a recurrence, results of the resampling, and any other pertinent information.

Compliance with these requirements does not relieve the Permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or the resulting liability for failure to comply.

S3. FACILITY LOADING

Design Criteria

Flows or waste loadings specified in the Irrigation and Crop Management Plan shall not be exceeded.

S4. OPERATION AND MAINTENANCE

The Permittee shall, at all times, be responsible for the proper operation and maintenance of any facilities or systems of control installed to achieve compliance with the terms and conditions of the permit.

A. Bypass Procedures

The Permittee shall immediately notify the Department of any spill, overflow or bypass from any portion of the treatment system.

The bypass of wastes from any portion of the treatment system is prohibited, unless one of the following conditions (1, 2, or 3) applies:

1. *Unavoidable Bypass* -- Bypass is unavoidable to prevent loss of life, personal injury, or severe property damage. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass.

   If the resulting bypass from any portion of the treatment system results in noncompliance with this permit, the Permittee shall notify the Department in accordance with Condition S3.E "Noncompliance Notification."

2. *Anticipated Bypass That Has The Potential to Violate Permit Limits or Conditions* -- Bypass is authorized by an administrative order issued by the Department. The Permittee shall notify the Department at least 30 days before the planned date of bypass. The notice shall contain a description of the bypass and its cause; the duration of the bypass, including exact dates and times; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass. The Department will consider the following prior to issuing an administrative order:

   a. If the bypass is necessary to perform construction or maintenance-related activities essential to meet the requirements of the permit.

   b. If there are feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment down time, or transport of untreated wastes to another treatment facility.

   c. If the bypass is planned and scheduled to minimize adverse effects on the public and the environment.

   After consideration of the above and the adverse effects of the proposed bypass and any other relevant factors, the Department will approve or deny the request. The public shall be notified and given an opportunity to comment on bypass incidents of significant duration, to the extent feasible. Approval of a request to bypass will be by administrative order issued by the Department under RCW 90.48.120.

3. B*ypass For Essential Maintenance Without the Potential to Cause Violation of Permit Limits or Conditions* -- Bypass is authorized if it is for essential maintenance and does not have the potential to cause violations of limitations or other conditions of the permit, or adversely impact public health as determined by the Department prior to the bypass.

B. Irrigation Land Application

1. There shall be no runoff of wastewater applied to land by spray irrigation to any surface waters of the state or to any land not owned by or under control of the Permittee.

2. The Permittee shall use recognized good practices, and all available and reasonable procedures to control odors from the land application system. When notified by the Department, the Permittee shall implement measures to reduce odors to a reasonable minimum.

3. The wastewater shall not be applied to the irrigation lands in quantities that:

   a. Significantly reduce or destroy the long-term infiltration rate of the soil.

   b. Would cause long-term anaerobic conditions in the soil.

   c. Would cause ponding of wastewater and produce objectionable odors or support insects or vectors.

   d. Would cause leaching losses of constituents of concern beyond the treatment zone or in excess of the approved design. Constituents of concern are constituents in the wastewater, partial decomposition products, or soil constituents that would alter ground water quality in amounts that would affect current and future beneficial uses.

4. The Permittee shall maintain all irrigation agreements for lands not owned for the duration of the permit cycle. Any reduction in irrigation lands by termination of any irrigation agreements may result in permit modification or revocation. The Permittee shall immediately inform the Department in writing of any proposed changes to existing agreements.

S5. SOLID WASTE DISPOSAL

A. Solid Waste Handling

The Permittee shall handle and dispose of all solid waste material in such a manner as to prevent its entry into state ground or surface water.

B. Leachate

The Permittee shall not allow leachate from its solid waste material to enter state waters without providing all known, available and reasonable methods of treatment, nor allow such leachate to cause violations of the State Surface Water Quality Standards, Chapter 173-201A WAC, or the State Ground Water Quality Standards, Chapter 173-200 WAC.

The Permittee shall apply for a permit or permit modification as may be required for such discharges to state ground or surface waters.

S6. HYDROGEOLOGICAL REPORTS

A. Summary Hydrogeological Report

A Summary Hydrogeological Report shall be prepared using data obtained from the annual Hydrogeological Reports submitted during the term of the previous permits and the monitoring data obtained and reported on the DMR reports during the term of the previous permit. This document will be submitted on or before **April 15, 2009**. The Summary Hydrogeological Report should describe the hydrogeological conditions at the application fields including direction and rates of groundwater flow and seasonal variation, a summary of water quality results, a comparison of upgradient and downgradient water quality results, and wastewater loading estimates for each field for contaminants of concern. The report should provide all data collected over the monitoring period including:

1. A figure showing the location of the fields, monitoring stations, the Chehalis River, and other relevant site features

2. As-built diagrams for all monitoring wells

3. Measuring point elevations for all monitoring stations

4. Water level data obtained from all monitoring stations including hydrographs for representative stations

5. Water-table contour maps that show seasonal variation of groundwater flow direction

6. Hydrologic test results for wells and soil samples

7. Water quality results for all stations.

B. Annual Hydrogeological Reports

An annual Hydrogeological Report shall be submitted on or before April 15th each year starting **April 15, 2006**, for the Department review. The Annual Hydrogeologic Report should describe for the monitoring period all hydrogeologic studies and any new monitoring stations installed, the hydrogeologic conditions at the application fields including direction and rates of groundwater flow and seasonal variation, a summary of water quality results, and a comparison of up gradient and down gradient water quality. The annual hydrogeologic report should provide all data collected over the monitoring period including:

1. A figure showing the location of the fields, monitoring stations, the Chehalis River, and other relevant site features

2. As-built diagrams for all monitoring wells

3. Measuring point elevations for all monitoring stations

4. Later level data obtained from all monitoring stations including hydrographs for representative stations

5. Water-table contour maps that show seasonal variation of groundwater flow direction

6. Hydrologic test results for wells and soil samples

7. Water quality results for all stations.

S7. IRRIGATION AND CROP MANAGEMENT PLANS

A. Summary Irrigation and Crop Management Plan

A Summary Irrigation and Crop Management Plan shall be prepared using data obtained from the annual Irrigation and Crop Management Plans submitted during the term of the previous permit and the monitoring data obtained and reported on the DMR reports during the term of the previous permit. This document will be submitted on or before **April 15, 2009**. This study should propose the following:

1. Limits for the application of irrigation water to the fields including the calculations from which these limits were obtained. These limits shall be specific to month and field.

2. Limits for the application of nutrients and dissolved solids to the various fields including the calculations from which these limits were obtained. These limits should be chosen to prevent any increase over background for nitrogen, flow, or total dissolved solids in the downstream monitoring wells. These limits shall be specific to month and field.

3 To demonstrate that the concentration of total dissolved solids present in the wastewater is raised by volatile solids, the Permittee may submit proof of this contention as a part of the Irrigation and Crop Management Plan. This plan shall provide the answer for the following questions:

   a. What are the individual constituents that comprise TDS in this wastewater?

   b. What fraction of the TDS constituents are volatile?

   c. What fraction of the TDS constituents will be attenuated, and how will they be attenuated?

   d. Will the elevated BOD concentrations cause anaerobic conditions in the soils?

   e. How will these constituents effect ground water quality?

B. Annual Irrigation and Crop Management Plan

An Irrigation and Crop Management Plan shall be submitted annually by April 15th each year for Department review starting **April 15, 2006**. The plan shall generally conform with *Guidelines for Preparation of Engineering Reports for Industrial Wastewater Land Application Systems*, Ecology 1993. The plan must be prepared by a soil scientist. The plan shall include the following elements:

1. Annual Summary of Farm Operations for Previous Year
   This summary shall include:

   a. For each crop grown, the total acreage and quantity harvested.

   b. Calculated balances for nutrients, salts, TDS, or other design limiting parameters. The calculations shall include crop consumptive use, process wastewater loadings of nutrients, salts, TDS or other design limiting parameters, and contributions from commercial fertilizers applied.

   c. Calculated water balance. The calculations shall include irrigation system efficiency and application uniformity, the quantity of supplemental irrigation water and process wastewater applied, crop consumptive use, water stored in the soil profile outside the normal growing season, and salt leaching requirements.

S8. SCHEDULE OF COMPLIANCE

Monitoring Well 6 will be abandoned. Two additional monitoring wells will be drilled to improve monitoring. These wells shall be completed and developed before the September sampling event. Monitoring Well 7 will be installed approximately 600 feet south of Monitoring Well 6. Monitoring Well No. 8 will be installed in the northwest corner of Field VII. These wells shall meet the requirements of WAC 173-160. The elevation above mean sea level of the top of the well casing shall be established by land survey. As built drawings of each new well, elevation survey results, and a report describing the methods and results of well development shall be submitted with the annual hydrologic report due April 15, 2006.

S9. MONITORING WELL SAMPLING PROCEDURE

Guidance for Sampling Shallow Monitoring Wells for Conventional Parameters Using a Submersible Pump with No Discharge Control

Measure Water Level

Rinse water level probe with de-ionized water before and after measurements. Measure water level in well. Re-check water level to verify reading.
Record date, time, and depth to water to 0.01 feet

Calculate Well Volume

Depth to water (Top of Casing) _____ feet

Depth of well (Top of Casing) _____ feet
Calculate Height of Water = Depth of Well – Depth of Water= _____ feet
Calculate Multiplier = ((diameter of well in inches)/24)^{2}x23.5
(Note: Multiplier for 2-inch diameter well = 0.163)
Well Volume = Multiplier x Height of Water= _____ gallons.
Well Volume (in gallons) x 3.785= _____ liters.

Purging Procedure

- Decontaminate pump (see pump decontamination procedure below)
- Calibrate pH and dissolved oxygen meters and set all probes in flow cell
- Connect dedicated tubing for the correct well to the pump
- Set pump intake at about one foot below the top of the well screen if the water level is above the screen or if the water level is below the well screen, set the pump intake about 2-3 feet below the water level. Secure to casing.
- Start pump. If air is being pumped deepen pump until flow is uniform. Record depth of pump intake.
- Measure discharge with calibrated bucket and stopwatch, record
- Connect discharge to flow cell and measure discharge parameters pH, conductivity, temperature, and dissolved oxygen
- Record purge parameter results every five minutes and at every well volume
- After purge parameters stabilize for two consecutive well volumes samples should be collected
- Stability:
  - pH< 0.1 Standard Units
  - Conductivity <1% of reading
  - Temperature <0.1ºC
  - Dissolved Oxygen <10% of reading
- If required test for ferrous iron with test kit or 2,2-dipyridyl

Sampling

- Sample water before it enters the flow cell.
- Begin sampling by directing discharge to sample bottles
- Keep ends of discharge tubing clean and do not let tubing touch inside sample bottles.
- Fill bottles to bottle neck. Exceptions: e.g. minimize headspace for alkalinity
- Bottles with preservatives should not be overfilled.
- Attach in-line filters to discharge tubing and discharge a few hundred milliliters before collecting sample in bottle

Quality Assurance Samples

A **duplicate set of samples** should be taken at one well for each sampling event where parameter concentrations are expected to occur in mid–ranges. Collect first sample. Return to same well site after water level has stabilized and resample well. A comparison of the two sample results will provide an estimate of the overall precision of sampling and analysis.

One **rinsate blank** should be obtained per sampling event if the pump is decontaminated between well stations. The rinsate blank consists of de-ionized water pumped through a decontaminated pump.

Submersible Pump Decontamination Procedure

Place pump in 5-gallon bucket 2/3 full of tap water with a **little** Liquinox
Run pump 5 minutes
Place pump in 5-gallon buck 2/3 full of de-ionized water
Run pump 5 minutes

Miscellaneous

1. Sample order of wells: Sample wells with lowest concentrations first and highest concentrations last. Usually sample upgradient wells first.
2. Dedicate downhole sample tubing to each well. Remove the tubing between sampling events and store in a labeled clean bag or cover intake and suspend in well.
3. Distilled and de-ionized water are considered equal for this guidance.

GENERAL CONDITIONS

G1. SIGNATORY REQUIREMENTS

All applications, reports, or information submitted to the Department shall be signed as follows:

A. All permit applications shall be signed by either a principal executive officer or ranking elected official.

B. All reports required by this permit and other information requested by the Department shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

1. The authorization is made in writing by the person described above and is submitted to the Department at the time of authorization, and

2. The authorization specifies either a named individual or any individual occupying a named position.

C. Changes to authorization. If an authorization under paragraph B.2. above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization must be submitted to the Department prior to or together with any reports, information, or applications to be signed by an authorized representative.

D. Certification. Any person signing a document under this section shall make the following certification:

> "I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

G2. RIGHT OF ENTRY

Representatives of the Department shall have the right to enter at all reasonable times in or upon any property, public or for the purpose of inspecting and investigating conditions relating to the pollution or the possible pollution of any waters of the state. Reasonable times shall include normal business hours; hours during which production, treatment, or discharge occurs; or times when the Department suspects a violation requiring immediate inspection. Representatives of the Department shall be allowed to have access to, and copy at reasonable cost, any records required to be kept under terms and conditions of the permit; to inspect any monitoring equipment or method required in the permit; and to sample the discharge, waste treatment processes, or internal waste streams.

G3. PERMIT ACTIONS

This permit shall be subject to modification, suspension, or termination, in whole or in part by the Department for any of the following causes:

A. Violation of any permit term or condition;

B. Obtaining a permit by misrepresentation or failure to disclose all relevant facts;

C. A material change in quantity or type of waste disposal;

D. A material change in the condition of the waters of the state; or

E. Nonpayment of fees assessed pursuant to RCW 90.48.465.

The Department may also modify this permit, including the schedule of compliance or other conditions, if it determines good and valid cause exists, including promulgation or revisions of regulations or new information.

G4. REPORTING A CAUSE FOR MODIFICATION

The Permittee shall submit a new application, or a supplement to the previous application, along with required engineering plans and reports, whenever a new or increased discharge or change in the nature of the discharge is anticipated which is not specifically authorized by this permit. This application shall be submitted at least 60 days prior to any proposed changes. Submission of this application does not relieve the Permittee of the duty to comply with the existing permit until it is modified or reissued.

G5. PLAN REVIEW REQUIRED

Prior to constructing or modifying any wastewater control facilities, an engineering report and detailed plans and specifications shall be submitted to the Department for approval in accordance with Chapter 173-240 WAC. Engineering reports, plans, and specifications should be submitted at least 180 days prior to the planned start of construction. Facilities shall be constructed and operated in accordance with the approved plans.

G6. COMPLIANCE WITH OTHER LAWS AND STATUTES

Nothing in the permit shall be construed as excusing the Permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

G7. DUTY TO REAPPLY

The Permittee must apply for permit renewal by **April 15, 2009**.

G8. PERMIT TRANSFER

This permit is automatically transferred to a new owner or operator if:

A. A written agreement between the old and new owner or operator containing a specific date for transfer of permit responsibility, coverage, and liability is submitted to the Department;

B. A copy of the permit is provided to the new owner and;

C. The Department does not notify the Permittee of the need to modify the permit.

Unless this permit is automatically transferred according to section A. above, this permit may be transferred only if it is modified to identify the new Permittee and to incorporate such other requirements as determined necessary by the Department.

G9. PAYMENT OF FEES

The Permittee shall submit payment of fees associated with this permit as assessed by the Department. The Department may revoke this permit if the permit fees established under Chapter 173-224 WAC are not paid.

G10. PENALTIES FOR VIOLATING PERMIT CONDITIONS

Any person who is found guilty of willfully violating the terms and conditions of this permit shall be deemed guilty of a crime, and upon conviction thereof, shall be punished by a fine of up to ten thousand dollars and costs of prosecution, or by imprisonment in the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation.

Any person who violates the terms and conditions of a waste discharge permit shall incur, in addition to any other penalty as provided by law, a civil penalty in the amount of up to ten thousand dollars for every such violation. Each and every such violation shall be a separate and distinct offense, and in case of a continuing violation, every day's continuance shall be and be deemed to be a separate and distinct violation.